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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,011	01/03/2002	Otto J. Gregory	4628	6195

7590 06/03/2004

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EXAMINER

LEE, HWA S

ART UNIT PAPER NUMBER

2877

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/890,011	Applicant(s) GREGORY ET AL.	
	Examiner Andrew H. Lee	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7-10 and 12 is/are rejected.
- 7) ☐ Claim(s) 4, 6 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

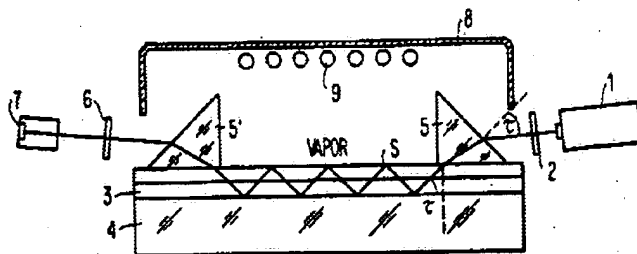
## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-3, 5, 7-10 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Franke (US 5,094,517) in view of Taylor et al (US 6,281,976).



Franke shows an optical waveguide sensor comprising:

a housing (8, 3, 4) the housing having an interior (inside surface of bell 8) and exterior surface (3,4), the exterior surface having at least two layers, the first layer (3) comprised of a low index of refraction material and the second layer comprised of a highly reflective material (4);

a first optical path in communication with the housing;

a second optical path in communication with the housing; and

means for detecting the change in the intensity of light when light is passed through the housing, reflected and refracted within the housing and received by the second optical path.

With regards to **claims 1, 2, and 8** Franke does not expressly show the use of optical fibers, but rather uses bulk optical components optically aligned to direct the beam to the required location. Taylor et al show the use of an optical fiber to be used as the path for a light beam.

At the time of the invention, one of ordinary skill in the art would have modified Franke such that an optical fiber is used for the first optical path and a second optical fiber is used for the second optical path in order to have a more flexible and easier to align sensor.

With regards to the terms “highly reflective” and “low index of refraction,” the applicant does not clearly define what properties or limitations of a material meet the definition of “highly reflective” and “low index of refraction.”

With regards to the use of the “capable of measuring...”, it has been held that the recitation that an element is “capable of” performing a function is not a positive limitation in any patentable sense. In re Hutchison, 69 USPQ 138.

With regards to **claims 9 and 10**, the bell housing (8) is comprised of glass (column 6, line 3) which is cylindrical.

With regards to **claim 7 and 12**, the function ability of the sensor being claimed has not been given patentable weight since the claim does not further limit claim 1 which is drawn to structure.

#### *Allowable Subject Matter*

3. **Claims 4, 6, and 11** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of

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allowable subject matter: The prior art of record fails to show or to suggest an optical waveguide sensor comprising of all the elements as presently claimed wherein the material of the first layer is selected from the group consisting of aluminum, silver, platinum and palladium, nor does the prior art show or suggest the housing of an optical waveguide sensor having a dimension of 0.5 mm inside diameter x 1 mm outside diameter x 100 mm long.

Papers related to this application may be submitted to Technology Center (TC) 2800 by facsimile transmission. Papers should be faxed to TC 2800 via the PTO Fax Center located in CP4-4C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Center number is 703-872-9306 for regular communications and for After Final communications.

If the Applicant wishes to send a Fax dealing with either a Proposed Amendment or for discussion for a phone interview then the fax should:

- a) Contain either the statement "DRAFT" or "PROPOSED AMENDMENT" on the Fax Cover Sheet; and
- b) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Hwa Lee whose telephone number is (571) 272-2419.

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The examiner can normally be reached on M-Th. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415.

A handwritten signature in black ink, appearing to read 'Andrew Lee', with a stylized, flowing script.

Andrew Lee  
Patent Examiner  
Art Unit 2877

May 18, 2004/ahl